SI-18 Series

2011 November V2

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Safety Information

Your SI-18 is designed and tested to meet the latest standards of safety for information technology equipment. However, to ensure your safety, it is important that you read the following safety instructions.

Setting up your system

- Read and follow all instructions in the documentation before you operate your system.
- Do not use this product near water.
- Set up the system on a stable surface. Do not secure the system on any unstable plane.
- Do not place this product on an unstable cart, stand, or table. The product may fall, causing serious damage to the product.
- Slots and openings on the chassis are for ventilation. Do not block or cover these openings. Make sure you leave plenty of space around the system for ventilation. ***Never insert objects of any kind into the ventilation openings***.
- This system should be operated from the type of power indicated on the marking label. If you are not sure of the type of power available, consult your dealer or local power company.
- Use this product in environments with ambient temperatures between 0˚C and 45˚C.
- If you use an extension cord, make sure that the total ampere rating of the devices plugged into the extension cord does not exceed its ampere rating.
- DO NOT LEAVE THIS EQUIPMENT IN AN ENVIRONMENT WHERE THESTORAGE TEMPERATURE MAY GO BELOW -20° C (-4° F) OR ABOVE 80° C (176° F). THIS COULD DAMAGE THE EQUIPMENT. THE EQUIPMENT SHOULD BE IN A CONTROLLED ENVIRONMENT.

Care during use

- Do not walk on the power cord or allow anything to rest on it.
- Do not spill water or any other liquids on your system.
- When the system is turned off, a small amount of electrical current still flows. Always unplug all power, and network cables from the power outlets before cleaning the system.
- If you encounter the following technical problems with the product, unplug the power cord and contact a qualified service technician or your retailer.
  - ➤ The power cord or plug is damaged.

- Liquid has been spilled into the system.
- The system does not function properly even if you follow the operating instructions.
- The system was dropped or the cabinet is damaged.

Lithium-Ion Battery Warning

CAUTION: Danger of explosion if battery is incorrectly replaced. Replace only with the same or equivalent type recommended by the manufacturer. Dispose of used batteries according to the manufacturer's instructions.

NO DISASSEMBLY

The warranty does not apply to the products that have been disassembled by users
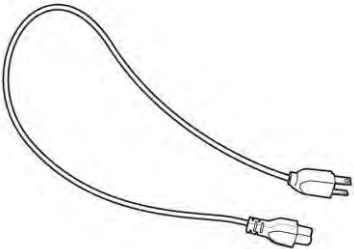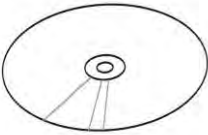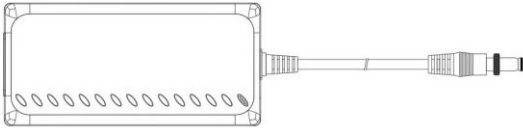
WARNING
HAZARDOUS MOVING PARTS
KEEP FINGERS AND OTHER BODY PARTS AWAY

Acknowledgments

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- AMD and ATI are registered trademarks of AMD Corporation.
- Microsoft Windows is a registered trademark of Microsoft Corporation.
- FINTEK is a registered trademark of FINTEK Electronics Corporation.
- REALTEK is a registered trademark of REALTEK Electronics Corporation.
- All other product names or trademarks are properties of their respective owners.

Accessories

a. Power Cord x 1	b. Driver CD x 1
c. Power Brick x 1	

Components

I/O View

Refer to the diagram below to identify the components on this side of the system.

DVI

The Digital Visual Interface (DVI) port supports a high quality VGA-compatible device such as a monitor or projector to allow viewing on a larger external display.

LAN

The eight-pin RJ-45 LAN port supports a standard Ethernet cable for connection to a local network.

COM

Communication or serial port is compatible with RS-232 interface without RI (ring indicator) signal.

USB

The USB (Universal Serial Bus) port is compatible with USB devices such as keyboards, mouse devices, cameras, and hard disk drives. USB allows many devices to run simultaneously on a single computer, with some peripheral acting as additional plug-in sites or hubs.

AUDIO

The stereo audio jack (3.5mm) is used to connect the system's audio out signal to amplified speakers or headphones.

DC-IN

The supplied power adapter converts AC power to DC power for use with this jack. Power supplied through this jack supplies power to the system. To prevent damage to the system, always use the supplied power adapter.

Specification

System Mainboard	EB-900
Construction	SGCC 1.0t
Chassis Color	Black / White
Storage	2.5" 80GB SATA HDD x 1
Mounting	Wall mount
Dimensions	125.5(W) x 36(H) x 125.5(D)mm (4.94" x 1.41" x 4.94")
Power Supply	60W DC adapter
Operating Temperature	0°C ~ 45°C (32°F ~ 113°F)
Storage Temperature	-20°C ~ 80°C
Relative Humidity	5~90% @45°C (non-condensing)
Vibration	HDD: 0.25 Grms/5~500Hz random operation
Shock	HDD: 15 Grms peak acceleration (11 msec duration)
RoHS	Available

·This specification is subject to change without prior notice.

Mounting SI-18 to the Wall
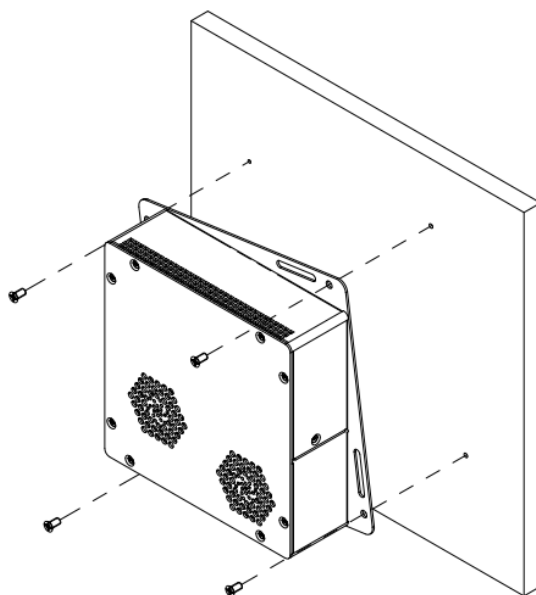
You can install SI-18 on plastic (LCD monitor), wood, drywall surface over studs, or a solid concrete or metal plane directly. Ensure the installer uses at least four M3 length 6mm screws to secure the system on wall. ***Six M3 length 6mm screws are recommended to secure the system on wall.***

Fasteners are not included with the unit, and must be supplied by the installer. The types of fasteners required are dependent on the type of wall construction. Choose fasteners that are rated either "Medium Duty" or "Heavy Duty." To assure proper fastener selection and installation, follow the fastener manufacturer's recommendations.

Wall mounting requirements

Note: Before mounting the system on wall, ensure that you are following all applicable building and electric codes.

When mounting, ensure that you have enough room for power and signal cable routing. And have good ventilation for power adapter. The method of mounting must be able to support weight of the SI-18 plus the suspend weight of all the cables to be attached to the system. Use the following methods for mounting your system:

Mounting to hollow walls

- **Method 1: Wood surface** – A minimum wood thickness – 38mm (1.5in.) by 25.4 cm (10in.) – of high, construction – grade wood is recommended.
  Note: This method provides the most reliable attachment of the unit with little risk that the unit will come loose or require ongoing maintenance.
- **Method 2: Drywall walls** - Drywall over wood studs is acceptable.

Mounting to a solid concrete or brick wall - Mounts on a flat smooth surface.

Selecting the location

Plan the mounting location thoroughly. Locations such as walkway areas, hallways, and crowded areas are not recommended. Mount the unit to a flat, sturdy, structurally sound column or wall surface.

The best mounting surface is a standard countertop, cabinet, table, or other structure that is minimally the width and length of the unit. This recommendation reduces the risk that someone may accidentally walk into and damage the device. Local laws governing the safety of individuals might require this type of consideration.

Exploded view of the SI-18 assembly
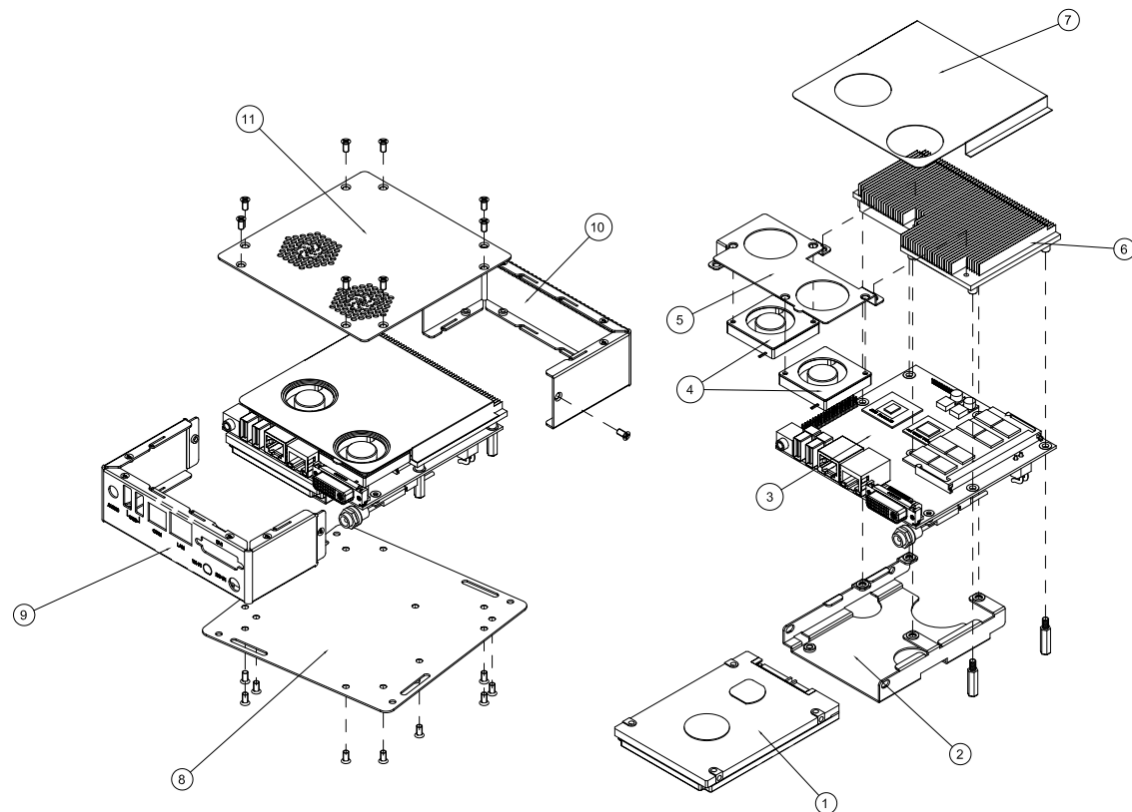
Parts description

Part NO.	Description	Part NO.	Description
1	HDD	2	HDD bracket
3	EB900	4	FAN Set
5	FAN bracket	6	Heatsink
7	FAN Dock	8	Bottom Chassis / Mounting
9	Chassis Body – I/O	10	Chassis Body
11	Top cover		

Installation

Installing WLAN antenna (Optional)

SI-18 reserved one SMA connector hole for WLAN (wireless LAN) antenna connection on I/O side. It means you can only use one antenna solution WLAN card. For 802.11n solution, you can only have up to 150Mbit/s performance. You can have WLAN feature by purchase WLAN set from your sales representative. And follow below procedure to install the WLAN feature by yourself.

Before you start to install WLAN antenna and card please:
- Complete remove DC power source from SI-18.
- Please ensure you have good ESD protection environment and if possible please wear ESD protection equipment and have well grounding connection.

1. Upside-down SI-18 and let bottom side face to you.
2. Remove all M3 screw of bottom chassis (12 pieces) with properly screw driver from point A.
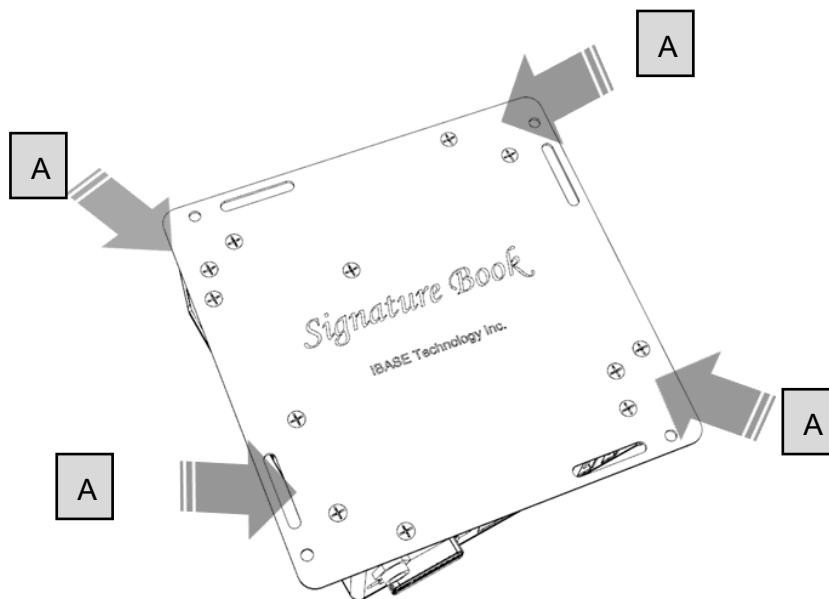
3. Rotating SI-18 to let bottom side face to your body.
4. Using screw driver to pinch out the knock-out metal-plate of SMA antenna hole from point B. To avoid the metal fall in system, please pinch out the metal-cover with same direction as the figure below.
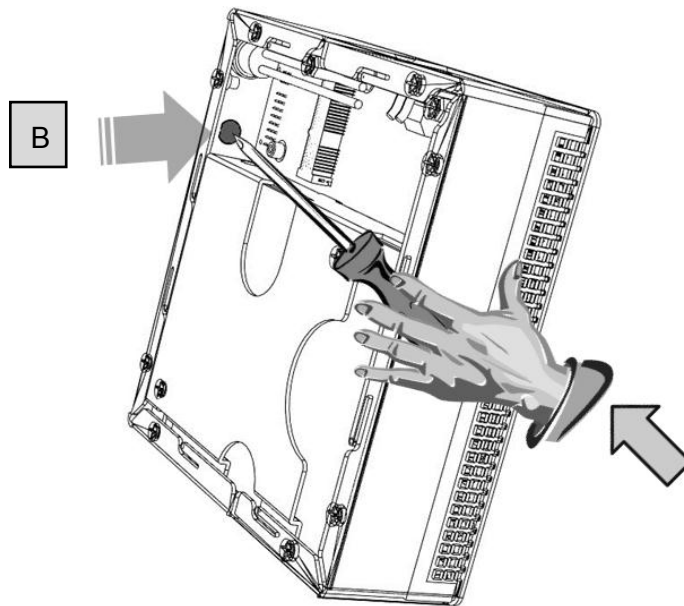
5.   Hold WLAN antenna SMA head carefully and through the hole on I/O wall.
     Beware the direction of SMA head with the hole, there only has one direction can
     pass through the antenna hole. And there has one washer shall be put on head
     before through into the hole, point C.
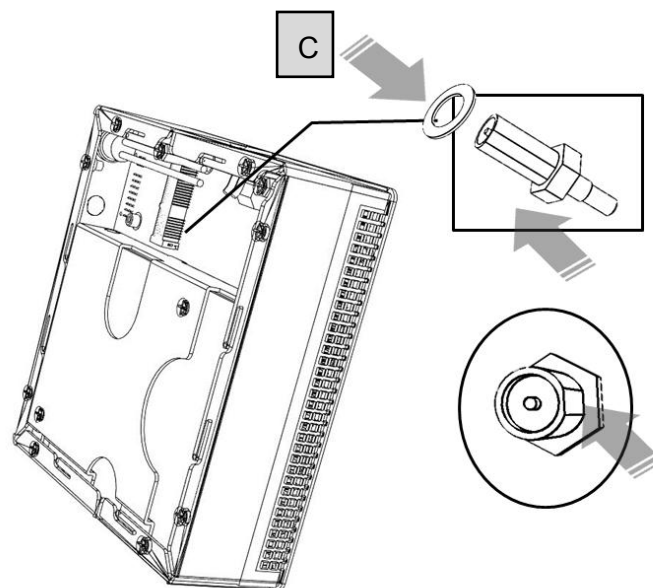
6.   Fit on antenna washer then hex nut on SMA connector and use hex socket driver
     or plier to tie the nut to ensure the SMA connector secure on I/O wall.
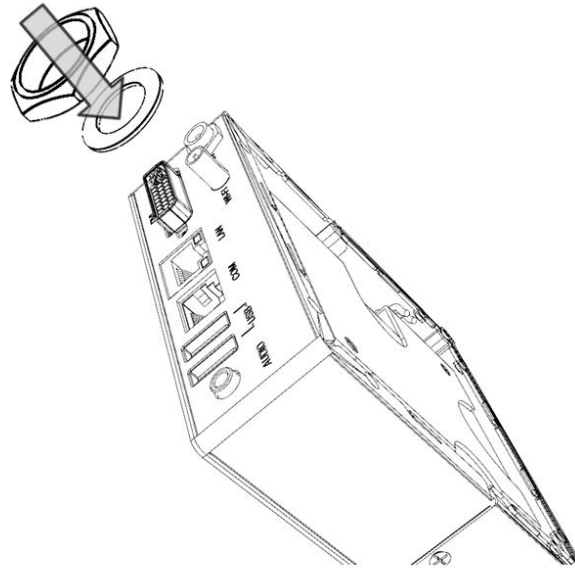
7. Install your WLAN card on mini-PCIe connector and use the screw provided by WLAN card to secure WLAN card in position on point D.
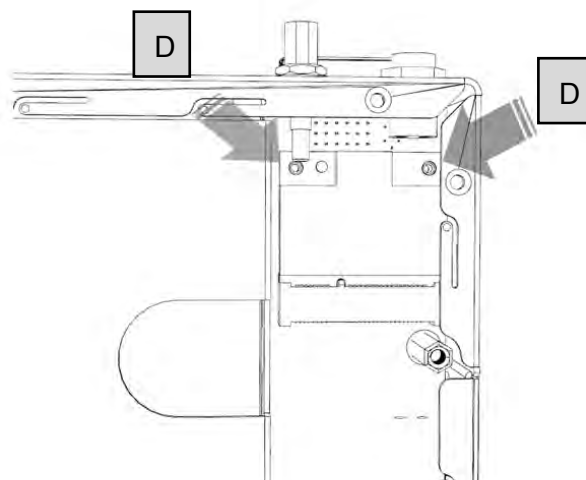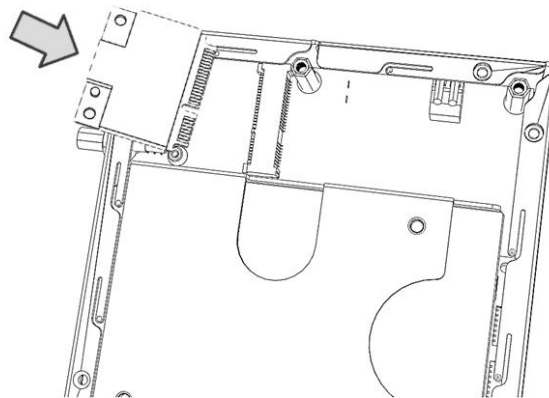
8. Wiring the IPX connector on WLAN card and manage your internal antenna

cable routing.

9. Screw bottom chassis back to system with 8 screws where disassembled by procedure 2 in above.
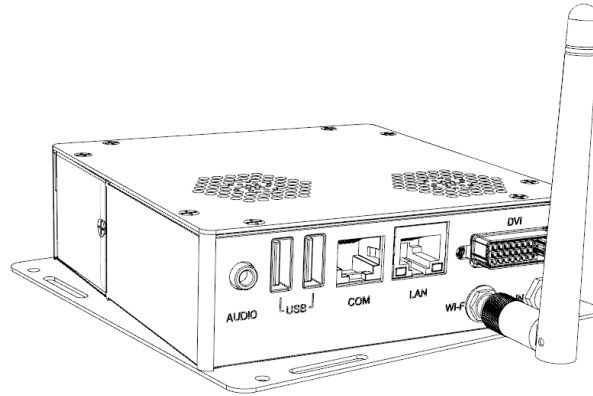
Installing the memory

The motherboard supports two DDR3 memory socket for a maximum total memory of 4GB in DDR3 memory type.

Installing and Removing Memory Module (CN1)

To install the DDR3 modules, locate the memory slot on the board and perform the following steps:

1. Hold the DDR3 module so that the key of the DDR3 module align with those on the memory slot.

2. Gently push the DDR3 module in SOCKET position until the clips of the slot close to hold the DDR3 module in place when the DDR3 module touches the bottom of the slot.

3. To remove the DDR3 module, press the clips with both hands.
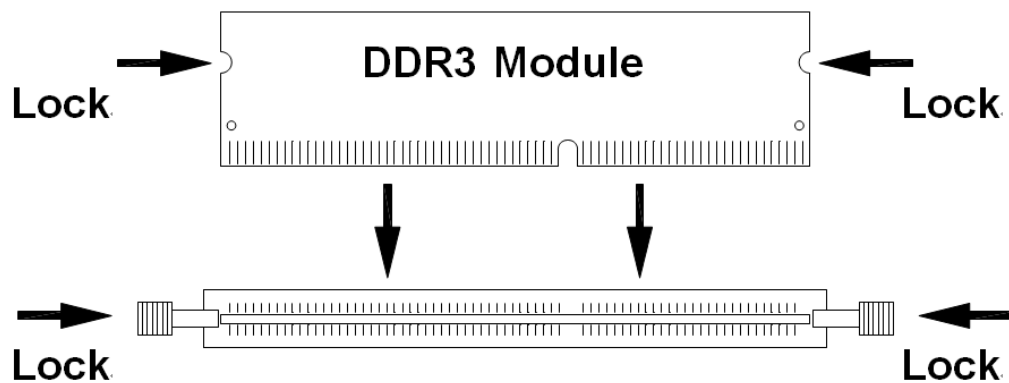
Setting Jumper

Jumpers are used on the motherboard to select various settings and features according to your needs and applications. Contact your supplier if you have doubts about the best configuration for your needs. The following lists the connectors and their respective functions.

Jumper Locations
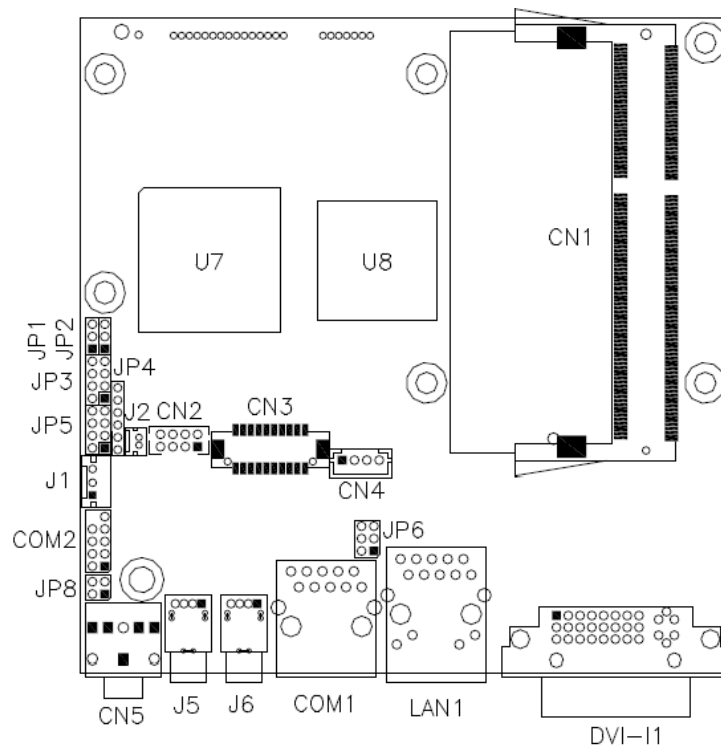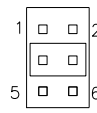
JP1: Clear CMOS Setting

JP1	Setting
	Normal
	Clear CMOS

JP2: LCD Panel Power Selection

JP2	LCD Panel Power
1 2 3	3.3V
1 2 3	5V

JP6: COM1 RS232 +5V/+12V Power Setting

JP6	Setting	Function
1 □ □ 2 □ □ 5 □ □ 6	Pin 1-2 Short/Closed	+12V
	Pin 3-4 Short/Closed	Normal
	Pin 5-6 Short/Closed	+5V

Pin Definition

COM1: COM1 Serial Port

COM1	Pin	Signal Name
	1	DSR, Data set ready
	2	GND, ground
	3	GND, ground
	4	TXD, Transmit data
	5	RXD, Receive data
	6	DCD, Data carrier detect
	7	DTR, Data terminal ready
	8	CTS, Clear to send
	9	RTS, Request to send
	10	RI, Ring indicator

BIOS Setup

This chapter describes the different settings available in the AMI BIOS that comes with the board.

BIOS Introduction

The BIOS (Basic Input/Output System) installed in your computer system's ROM supports Intel processors. The BIOS provides critical low-level support for a standard device such as disk drives, serial ports and parallel ports. It also password protection as well as special support for detailed fine-tuning of the chipset controlling the entire system.

BIOS Setup

The BIOS provides a Setup utility program for specifying the system configurations and settings. The BIOS ROM of the system stores the Setup utility. When you turn on the computer, the BIOS are immediately activated. Pressing the <Del> key immediately allows you to enter the Setup utility. If you are a little bit late pressing the <Del> key, POST (Power On Self-Test) will continue with its test routines, thus preventing you from invoking the Setup. If you still wish to enter Setup, restart the system by pressing the "Reset" button or simultaneously pressing the <Ctrl>, <Alt> and <Delete> keys. You can also restart by turning the system Off and back On again. The following message will appear on the screen:

Press <DEL> to Enter Setup

In general, you press the arrow keys to highlight items, <Enter> to select, the <PgUp> and <PgDn> keys to change entries, <F1> for help and <Esc> to quit.

When you enter the Setup utility, the Main Menu screen will appear on the screen. The Main Menu allows you to select from various setup functions and exit choices.

Main BIOS Setup

This setup allows you to record some basic hardware configurations in your computer system and set the system clock.

```
            Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.
  Main    Advanced    Chipset    Boot    Security    Save & Exit
  BIOS INFORMATION
  BIOS Vendor             American Megatrends
  Core Version            4.6.6.0
  Compliency              UEFI 2.1
  Project Version         0ABVQ 0.10 x64
  Build Date and Time     04/12/2011 11:47:06

  Memory Information
  Total Memory            1008 MB (DDR3)       →  ←Select Screen
                                               ↑ ↓ Select Item
  System Language         [English]            Enter: Select
                                               +-   Change Field
  System Date             [Tue 09/07/2010      F1: General Help
  System Time             [00:08:21]           F2: Previous Values
                                               F3: Optimized Default
  Access Level            Administrator         F4: Save  ESC: Exit
```

Note: *If the system cannot boot after making and saving system changes with Setup, the AMI BIOS supports an override to the CMOS settings that resets your system to its default.*

Warning: *It is strongly recommended that you avoid making any changes to the chipset defaults. These defaults have been carefully chosen by both AMI and your system manufacturer to provide the absolute maximum performance and reliability. Changing the defaults could cause the system to become unstable and crash in some cases.*

System Language
Choose the system default language.

System Date
Set the Date. Use Tab to switch between Data elements.

System Time

Set the Time. Use Tab to switch between Time elements.

Advanced Settings

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

```
             Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.
┌─────────────────────────────────────────────────────────────────────────────┐
│ Main    Advanced     Chipset     Boot      Security    Save & Exit            │
│ ───────────────────────────────────────────────┬─────────────────────────────┤
│  Legacy OpROM Support                           │                             │
│  Launch PXE OpROM                     Disabled  │                             │
│  Launch Storage OpROM                 Enabled   │                             │
│                                                 │                             │
│  ▶ PCI Subsystem Settings                       │                             │
│  ▶ ACPI Settings                                │                             │
│  ▶ CPU Configuration                            │                             │
│  ▶ Auto Power On Schedule                       │  →  ←Select Screen          │
│  ▶ IDE Configuration                            │  ↑ ↓ Select Item            │
│  ▶ USB Configuration                            │  Enter: Select              │
│  ▶ Super IO Configuration                       │  +-   Change Field          │
│  ▶ H/W Monitor                                  │  F1: General Help           │
│                                                 │  F2: Previous Values        │
│                                                 │  F3: Optimized Default      │
│                                                 │  F4: Save  ESC: Exit        │
└─────────────────────────────────────────────────┴─────────────────────────────┘
```

Launch PXE OpROM

Enable or Disable Boot Option for Legacy Network Devices.

Launch Storage OpROM

Enable or Disable Boot Option for Legacy Mass Storage Devices with Option ROM.

PCI Subsystem Settings

This section allows you to configure the PCI, PCI-X and PCI Express settings.

Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.

Main	Advanced	Chipset	Boot	Security	Save & Exit

```
PCI Bus Driver Version          V 2.03.00
PCI ROM Priority                EFI Compatible ROM


PCI Common Settings
PCI Latency Timer               32 PCI Bus Clocks
VGA Palette Snoop               Disabled
PERR# Generation                Disabled
SERR# Generation                Disabled


PCI Express Device Settings                          → ←Select Screen
Relaxed Ordering                Disabled
Extended Tag                    Disabled             ↑↓ Select Item
No Snoop                        Enabled              Enter: Select
Maximum Payload                 Auto                 +-  Change Field
Maximum Read Request            Auto                 F1: General Help

                                                     F2: Previous Values
PCI Express Link Settings                            F3: Optimized Default
ASPM Support                    Disabled             F4: Save  ESC: Exit
WARNING: Enabling ASPM may cause
         Some PCI-E devices to fail
Extended Synch                  Disabled
```

PCIE Configuration

The fields under PCIE Configuration features settings for *Primary Dual Slot Config, GPP Slots Power Limit, GFX ports, GPPs and NB-SB port features*.

Internal Graphics Mode

The settings for IB828 are *Disabled and UMA; while the IB828 has additional settings of Sideport and UMA+sideport.*

Init Display First

The default setting is *IGX.*

NB Power Management

The default setting is *Auto.*

Memory Hole At 15M-16M

In order to improve performance, certain space in memory can be reserved for ISA cards.   This memory must be mapped into the memory space below 16 MB. The choices are *Enabled* and *Disabled*.

System BIOS Cacheable

The setting of *Enabled* allows caching of the system BIOS ROM at F000h-FFFFFh, resulting in better system performance.   However, if any program writes to this memory area, a system error may result.

PCI ROM Priority

In case of multiple Option ROMs (Legacy and EFI Compatible), specifies what PCI Option ROM to launch.

PCI Latency Timer

Value to be programmed into PCI Latency Timer Register.

VGA Palette Snoop

Enables or Disables VGA Palette Registers Snooping.

PERR# Generation

Enables or Disables PCI Device to Generate PERR#.

SERR# Generation

Enables or Disables PCI Device to Generate SERR#.

Relaxed Ordering

Enables or Disables PCI Express Device Relaxed Ordering.

Extended Tag

If ENABLED allows Device to use 8-bit Tag field as a requester.

No Snoop

Enables or Disables PCI Express Device No Snoop option.

Maximum Payload

Set Maximum Payload of PCI Express Device or allow System BIOS to select the value.

Maximum Read Request

Launches (Enabled/Disabled) the boot option for legacy network devices.

PCI Express Link Settings

Set Maximum Read Request Size of PCI Express Device or allow System BIOS to select the value.

ASPM Support

Set the ASPM Level:

Force L0 – Force all links to L0 State

AUTO – BIOS auto configure

DISABLE – Disables ASPM

Extended Synch

If ENABLED allows generation of Extended Synchronization patterns.

ACPI Settings

This section configures the system ACPI parameters.

```
        Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.
┌────────────────────────────────────────────────────────────────────────┐
│ Main    Advanced    Chipset    Boot    Security     Save & Exit         │
├────────────────────────────────────────────────────────────────────────┤
│   Enable ACPI Auto Configuration      Disabled                          │
│                                                    → ←Select Screen     │
│   Enable Hibernation                  Enabled                           │
│   ACPI Sleep State                    S3 (Suspend to RAM)  ↑↓ Select Item│
│   Lock Legacy Resources               Disabled     Enter: Select        │
│   S3 Video Report                     Disabled     +-  Change Field      │
│                                                    F1: General Help      │
│                                                    F2: Previous Values   │
│                                                    F3: Optimized Default │
│                                                    F4: Save  ESC: Exit   │
└────────────────────────────────────────────────────────────────────────┘
```

Enabled ACPI Auto Configuration

Enables or Disables BIOS ACPI Auto Configuration.

Enable Hibernation

Enables or Disables System ability to Hibernate (OS/S4 Sleep State). This option may be not effective with some OS.

ACPI Sleep State

Select the highest ACPI sleep state the system will enter, when the SUSPEND button is pressed.

Lock legacy Resources

Enabled or Disabled Lock of Legacy Resources

S3 Video Repost

Enabled or Disabled S3 Video Repost.

CPU Configuration

This section shows the CPU configuration parameters.

Main	Advanced	Chipset	Boot	Security	Save & Exit

CPU Configuration

Limit CPUID Maximum	Disabled
PSS Support	Enabled
PSTATE Adjustment	PState 0
PPC Adjustment	PState 0
SVM Mode	Enabled
NX Mode	Enabled
C6 Mode	Auto
► Node 0 Information	

```
→ ←Select Screen
↑↓ Select Item
Enter: Select
+-  Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save  ESC: Exit
```

Limit CPUID Maximum

Disabled for Windows XP.

PSS Support

Enabled /disabled the generation of ACPI_PPC, and _PCT objects.

PSTATE Adjustment

Provide to adjust startup P-state level.

PPC adjustment

Provide to adjust_PPC object.

NX Mode

Enabled/disabled NO-execute page protection Function.

SVM Mode

Enabled/disabled CPU Virtualization.

C6 Mode

Enabled/disabled C6.

Node 0 Information

View Memory Information related to Node 0.

Auto Power On Schedule

This section setups the power on time for the system.

```
Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.
┌─────────────────────────────────────────────────────────────────────────┐
│ Main    Advanced    Chipset    Boot      Security    Save & Exit         │
├─────────────────────────────────────────────┬───────────────────────────┤
│ Auto Power on Schedule                       │                           │
│                                              │                           │
│ Firmware Version          T.B.D.             │ → ←Select Screen          │
│ Schedule Slot 1           None               │ ↑ ↓ Select Item           │
│ Schedule Slot 2           None               │ Enter: Select             │
│                                              │ +-  Change Field          │
│                                              │ F1: General Help          │
│                                              │ F2: Previous Values       │
│                                              │ F3: Optimized Default     │
│                                              │ F4: Save  ESC: Exit       │
└─────────────────────────────────────────────┴───────────────────────────┘
```

Schedule Slot 1

Setup the hou/minute for sytem power on.

Schedule Slot 2

Setup the hou/minute for sytem power on.

.

IDE Configuration

This section shows the IDE devices configuration.

```
Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.
┌─────────────────────────────────────────────────────────────────────────┐
│ Main    Advanced    Chipset    Boot      Security    Save & Exit         │
├─────────────────────────────────────────────┬───────────────────────────┤
│ SATA Configuration                           │                           │
│                                              │ → ←Select Screen          │
│ SATA Port0               Enabled             │ ↑ ↓ Select Item           │
│ SATA Port1               Enabled             │ Enter: Select             │
│ SATA Port2               Enabled             │ +-  Change Field          │
│ SATA Port3               Enabled             │ F1: General Help          │
│ SATA Port4               Enabled             │ F2: Previous Values       │
│ SATA Port5               Enabled             │ F3: Optimized Default     │
│                                              │ F4: Save  ESC: Exit       │
│                                              │ ESC: Exit                 │
└─────────────────────────────────────────────┴───────────────────────────┘
```

Serial-ATA Controller

Enable / Disable Serial ATA Controller.

USB Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit

```
USB Configuration

                                            → ←Select Screen
USB Devices:
    1 Keyboard, 1 Mouse                     ↑ ↓ Select Item
                                            Enter: Select
Legacy USB Support        Enabled           +-  Change Field
EHCI Hand-off             Disabled          F1: General Help
                                            F2: Previous Values
USB hardware delays and time-outs:          F3: Optimized Default
USB transfer time-out     20 sec            F4: Save  ESC: Exit
Device reset time-out     20 sec
Device power-up delay     Auto
```

Legacy USB Support

Enables Legacy USB support.

AUTO option disables legacy support if no USB devices are connected.

DISABLE option will keep USB devices available only for EFI applications.

EHCI Hand-off

Enabled/Disabled. This is a workaround for Oses without EHCI hand-off support. The EHCI ownership change should be claimed by EHCI driver.

USB transfer time-out

The time-out value for Control, Bulk, and Interrupt transfers.

Device reset time-out

USB mass storage device Start Unit command time-out.

Device power-up delay

Maximum time the device will take before it properly reports itself to the Host Controller. 'Auto' users default value: for a Root port it is 100ms, for a Hub port the delay is taken from Hub descriptor.

Super IO Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit

Super IO Configuration

Super IO Chip   F81801
-> Serial Port 0 Configuration
-> Serial Port 2 Configuration
  Power Failure   Always off

→ ←Select Screen
↑↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Serial Port 0/1 Configuration

Set Parameters of Serial Port 0/1 (COMA/COMB)

Power Failure

The options: Keep last state, By pass mode, Always on, and Always off.

H/W Monitor

Main	Advanced	Chipset	Boot	Security	Save & Exit

PC Health Status

Smart Fan Function	[Disabled]
CPU Temperature	+64 C
System Temperature	+33 C
Fan Speed	N/A
VCC3V	3.376 V
Vcore	0.960 V
Memory Voltage	1.488 V
VSB3V	3.392 V
VBAT	3.040 V
CPU Shutdown Temperature	[Disabled]

→ ←Select Screen
↑↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Temperatures/Voltages

The values are read-only values as monitored by the system and show the PC health status.

CPU Shutdown Temperature

Aside from the Disabled options, this field allows the setting of shutdown temperature from 70C to 95C.

Chipset Settings

This section allows you to configure and improve your system and allows you to set up some system features according to your preference.

```
┌──────────────────────────────────────────────────────────────────────────┐
│ Main    Advanced    Chipset    Boot      Security      Save & Exit         │
├──────────────────────────────────────────────────────────────────────────┤
│                                        │                                   │
│  ► North Bridge                        │                                   │
│  ► North Bridge LVDS Config Select     │  → ←Select Screen                 │
│  ► South Bridge                        │  ↑↓ Select Item                   │
│                                        │  Enter: Select                    │
│                                        │  +-  Change Field                 │
│                                        │  F1: General Help                 │
│                                        │  F2: Previous Values              │
│                                        │  F3: Optimized Default            │
│                                        │  F4: Save  ESC: Exit              │
│                                        │                                   │
└──────────────────────────────────────────────────────────────────────────┘
```

North Bridge

This item shows the North Bridge Parameters.

North Bridge LVDS Config Select

This item shows the Specify INT15 options for LVDS

South Bridge

This item shows the South Bridge Parameters.

North Bridge

This section allows you to configure the North Bridge Chipset.

```
┌─────────────────────────────────────────────────────────────────────────────┐
│  Main      Advanced     Chipset       Boot        Security      Save & Exit   │
├─────────────────────────────────────────────────────────┬───────────────────┤
│  North Bridge Configuration                             │                   │
│                                                         │                   │
│  NB GPP Core Config              [GPP_CORE_x4x2x1x1]    │                   │
│                                                         │                   │
│  Port 4 Control                  [Enabled]              │                   │
│    Aspm Mode Control             [Disabled]             │                   │
│    Hotplug Mode Control          [Hotplug Basic]        │                   │
│  Port 5 Control                  [Enabled]              │                   │
│  Port 6 Control                  [Enabled]              │                   │
│  Port 7 Control                  [Enabled]              │ → ←Select Screen  │
│  Port 8 Control                  [Enabled]              │ ↑ ↓ Select Item   │
│                                                         │ Enter: Select     │
│  IOMMU Mode                      Disabled               │ +-  Change Field  │
│  Memory Clock                    200MHz                 │ F1: General Help  │
│                                                         │ F2: Previous Values│
│  Memory Information                                     │ F3: Optimized Default│
│  Total Memory: 4096 MB (DDR3)                           │ F4: Save  ESC: Exit│
│  ► GFX Configuration                                    │                   │
│  ► Memory Configuration                                 │                   │
│  ► Node 0 Information                                   │                   │
└─────────────────────────────────────────────────────────┴───────────────────┘
```

IOMMU Mode

IOMMU is supported on LINUX based systems to convert 32bit I/O to 64bit MMIO.

Memory Clock

This option allows user to select different memory clock.

GFX Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit

GFX Configuration

PSPP Policy   Disabled

→ ←Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

PSPP Policy

PCIe speed power policy.

Memory Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit

Memory Configuration

Integrated Graphics   Auto
Bank Interleaving   Disabled

→ ←Select Screen
↑ ↓ Select Item
Enter: Select
+- Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save ESC: Exit

Integrated Graphics

Enable Integrate Graphics controller.

Node 0 Information

View memory information related to Node 0.

North Bridge LVDS Config Select

Main	Advanced	Chipset	Boot	Security	Save & Exit

Specify INT15 options for LVDS

DP0 Output Mode   Disabled
DP1 Output Mode   Single Link DVI-D

LVDS Panel Config Select   800x600

```
→ ←Select Screen
↑ ↓ Select Item
Enter: Select
+-   Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save  ESC: Exit
```

South Bridge

This section allows you to configure the South Bridge Chipset.

Main	Advanced	Chipset	Boot	Security	Save & Exit

SB CIM Version :   1.1.0.1

▶ SB SATA Configuration
▶ SB USB Configuration
▶ SB GPP Port Configuration
▶ SB HD Azalia Configuration

```
→ ←Select Screen
↑ ↓ Select Item
Enter: Select
+-   Change Field
F1: General Help
F2: Previous Values
F3: Optimized Default
F4: Save  ESC: Exit
```

SB SATA Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
OnChip SATA Channel		Enabled			
OnChip SATA Type		Native IDE			
OnChip IDE mode		Legacy mode			
SATA IDE Combined Mode		Enabled			→ ←Select Screen
Combined Mode Option		SATA as primary			↑↓ Select Item
					Enter: Select
SATA ESP on PORT0		Disabled			+- Change Field
SATA ESP on PORT1		Disabled			F1: General Help
SATA ESP on PORT2		Disabled			F2: Previous Values
SATA ESP on PORT3		Disabled			F3: Optimized Default
SATA ESP on PORT4		Disabled			F4: Save ESC: Exit
SATA ESP on PORT5		Disabled			
SATA Power on PORT0		Enabled			
SATA Power on PORT1		Enabled			
SATA Power on PORT2		Enabled			
SATA Power on PORT3		Enabled			
SATA Power on PORT4		Enabled			
SATA Power on PORT5		Enabled			

OnChip SATA Type

Native IDE / n RAID / n AHCI / n AHCI / n Legacy IDE / n IDE->AHCI / n HyperFlash

SB USB Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
OHCI HC (Bus 0 Dev 18 Fn 0)		Enabled			
OHCI HC (Bus 0 Dev 19 Fn 0)		Enabled			
OHCI HC (Bus 0 Dev 22 Fn 0)		Enabled			
OHCI HC (Bus 0 Dev 20 Fn 5)		Enabled		→ ←Select Screen	
				↑↓ Select Item	
USB PORT 0		Enabled		Enter: Select	
USB PORT 1		Enabled		+- Change Field	
USB PORT 2		Enabled		F1: General Help	
USB PORT 3		Enabled		F2: Previous Values	
USB PORT 4		Enabled		F3: Optimized Default	
				F4: Save ESC: Exit	
USB PORT 5		Enabled			
USB PORT 6		Enabled			
USB PORT 7		Enabled			
USB PORT 8		Enabled			
USB PORT 9		Enabled			
USB PORT 10		Enabled			
USB PORT 11		Enabled			
USB PORT 12		Enabled			
USB PORT 13		Enabled			
USB PORT FL0		Enabled			
USB PORT FL1		Enabled			
USB Device Wakeup From S3 or S4					

SB GPP Port Configuration

Main	Advanced	Chipset	Boot	Security	Save & Exit
SB GPP Function		Enabled			
GPP Port Link Configuration		1:1:1:1 mode			
hide unused GPP port		Enabled		→ ←Select Screen	
GPP Link ASPM		Disabled		↑↓ Select Item	
NB-SB PHY PLL Power Down		Enabled		Enter: Select	
SB GPP PHY PLL Power Down		Enabled		+- Change Field	
SB GPP LANE REVERSAL		Disabled		F1: General Help	
				F2: Previous Values	
				F3: Optimized Default	
				F4: Save ESC: Exit	

SB HD Azalia Configuration

Aptio Setup Utility

Main	Advanced	Chipset	Boot	Security	Save & Exit

HD Audio Azalia Device	Enabled	
HD Onboard PIN Config	Enabled	
Azalia Front Panel	Auto	→ ←Select Screen
SDIN0 Pin Config	Azalia	↑↓ Select Item
SDIN1 Pin Config	Azalia	Enter: Select
SDIN2 Pin Config	Azalia	+- Change Field
SDIN3 Pin Config	Azalia	F1: General Help
Azalia Snoop	Disabled	F2: Previous Values
		F3: Optimized Default
		F4: Save ESC: Exit

Boot Settings

This section allows you to configure the boot settings according to your preference.

Aptio Setup Utility – Copyright © 2010 American Megatrends, Inc.

Main	Advanced	Chipset	Boot	Security	Save & Exit

Boot Configuration		
Setup Prompt Timeout	1	
Bootup NumLock State	On	
Quiet Boot	Disabled	
CSM16 Module Version	07.63	→ ←Select Screen
GateA20 Active	Upon Request	↑↓ Select Item
Option ROM Messages	Force BIOS	Enter: Select
Interrupt 19 Canture	Disabled	+- Change Field
UEFI Boot	[Disabled	F1: General Help
		F2: Previous Values
Boot Option Priorities		F3: Optimized Default
		F4: Save ESC: Exit

Setup Prompt Timeout

Number of seconds to wait for setup activation key.

65535(0xFFFF) means indefinite waiting.

Bootup NumLock State

Select the keyboard NumLock state.

41

Quiet Boot

Enables/Disables Quiet Boot option.

GateA20 Active

UPON REQUEST – GA20 can be disabled using BIOS services.

ALWAYS – do not allow disabling GA20; this option is useful when any RT code is executed above 1MB.

Option ROM   Messages

Set display mode for Option ROM. Options are Force BIOS and Keep Current.

Interrupt 19 Canture

Enable: Allows Option ROMs to trap Int 19.

UEFI Option Priorities

Enables/Disables UEFI boot from disks.

Security Settings

```
            Aptio  Setup  Utility – Copyright © 2010 American Megatrends, Inc.
 ┌───────────────────────────────────────────────────────────────────────────┐
 │ Main      Advanced      Chipset      Boot    Security     Save & Exit       │
 │ Password Description                                                        │
 │                                                                            │
 │  If ONLY the Administrator's password is set, then                         │
 │  this only limits accesss to Setup and is only asked                       │
 │  for when entering Setup.                            → ←Select Screen       │
 │  If ONLY the User's password is set, then this is a  ↑↓ Select Item         │
 │  power on password and must be entered to boot      Enter: Select           │
 │  or enter Setup. In Setup the User will have        +-   Change Field       │
 │  Administrator rights.                              F1: General Help        │
 │  The password must be 3 to 20 characters.           F2: Previous Values     │
 │                                                     F3: Optimized Default   │
 │  Administrator Password                             F4: Save  ESC: Exit     │
 │  User Password                                                             │
 └───────────────────────────────────────────────────────────────────────────┘
```

Administrator Password

Set Setup Administrator Password.

User Password

Set User Password.

Save & Exit Settings

```
┌─────────────────────────────────────────────────────────────────────────────┐
│ Main    Advanced      Chipset      Boot       Security    Save & Exit         │
├─────────────────────────────────────────────────────┬───────────────────────┤
│  Save Changes and Exit                               │                       │
│  Disacard Changes and Exit                           │                       │
│  Save Changes and Reset                              │                       │
│  Discard Changes and Reset                           │ → ←Select Screen       │
│                                                      │ ↑↓ Select Item         │
│  Save Options                                        │ Enter: Select          │
│  Save Changes                                        │ +-  Change Field       │
│  Discard Changes                                     │ F1: General Help       │
│                                                      │ F2: Previous Values    │
│  Restore Defaults                                    │ F3: Optimized Default  │
│  Save as User Defaults                               │ F4: Save  ESC: Exit    │
│  Restore User Defaults                               │                       │
│                                                      │                       │
│  Boot Override                                       │                       │
│                                                      │                       │
│  Launch EFI Shell from filesystem device             │                       │
│                                                      │                       │
└─────────────────────────────────────────────────────┴───────────────────────┘
```

Save Changes and Exit

Exit system setup after saving the changes.

Disacard Changes and Exit

Exit system setup without saving any changes.

Save Changes and Reset

Reset the system after saving the changes.

Discard Changes and Reset

Reset system setup without saving any changes.

Save Changes

Save Changes done so far to any of the setup options.

Discard Changes

Discard Changes done so far to any of the setup options.

Restore Defaults

Restore/Load Defaults values for all the setup options.

Save as User Defaults

Save the changes done so far as User Defaults.

Restore User Defaults

Restore the User Defaults to all the setup options.

Boot Override

Pressing ENTER causes the system to enter the OS.

Launch EFI Shell from filesystem device

Attempts to launch EFI Shell application (Shellx64.efi) from one of the available filesystem devices.

Driver Installation

This section describes the installation procedures for software and drivers. The software and drivers are included with the motherboard. If you find the items missing, please contact the vendor where you made the purchase.

AMD A55E Chipset Family Graphic Driver Installation

Follow the steps below to install the AMD A55E chipset family graphics drivers.

1. Insert the CD that comes with the system. Click **AMD**, then **AMD A55E Chipset Drivers**, and then **AMD A55E Series Graphics Drivers**.
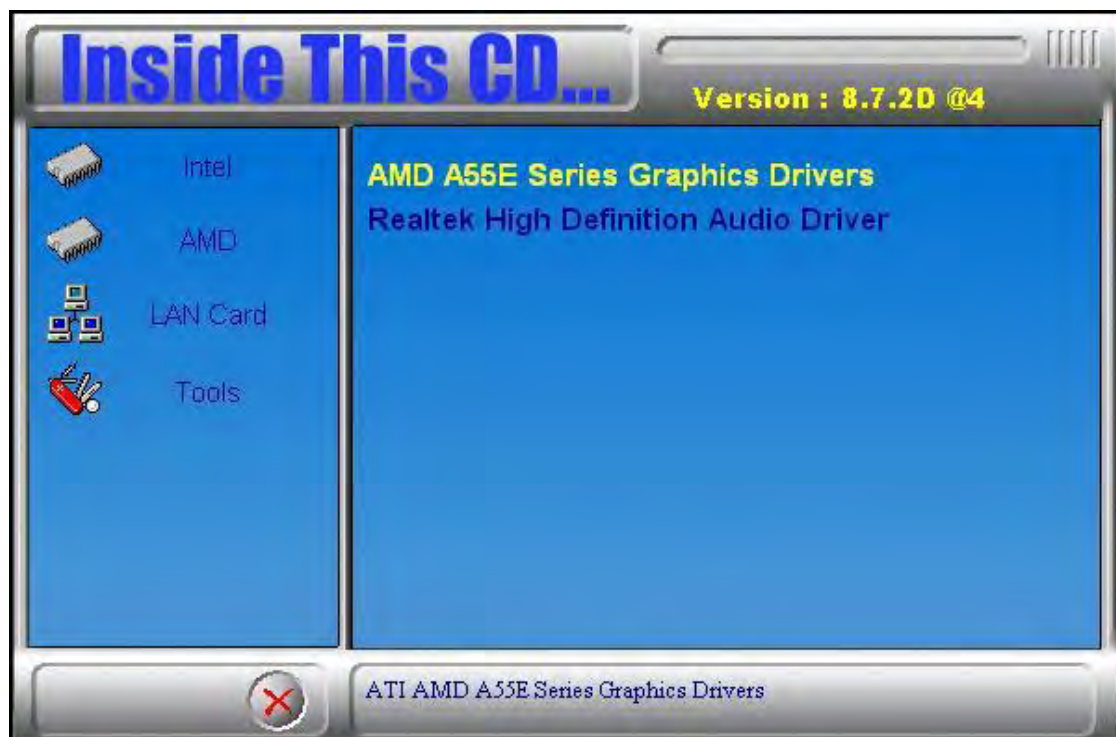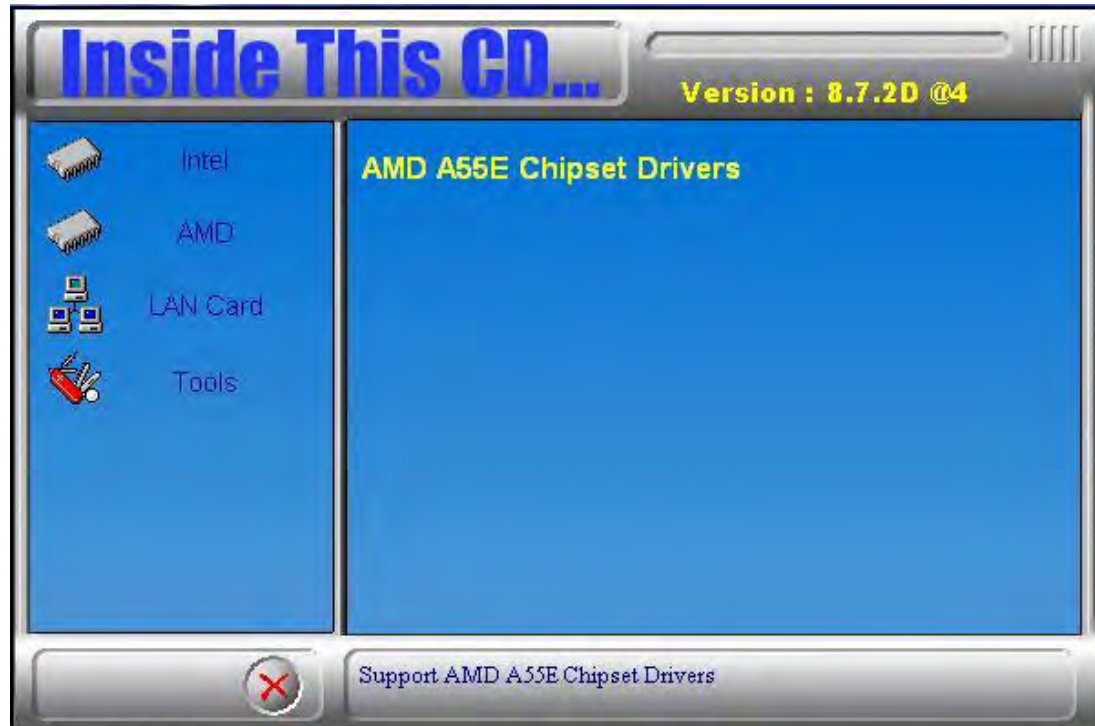
2. When the welcome screen to the ATI – Catalyst™ Install Manager appears, click *Next*. Now, click *Install* to allow the installation of the software components.
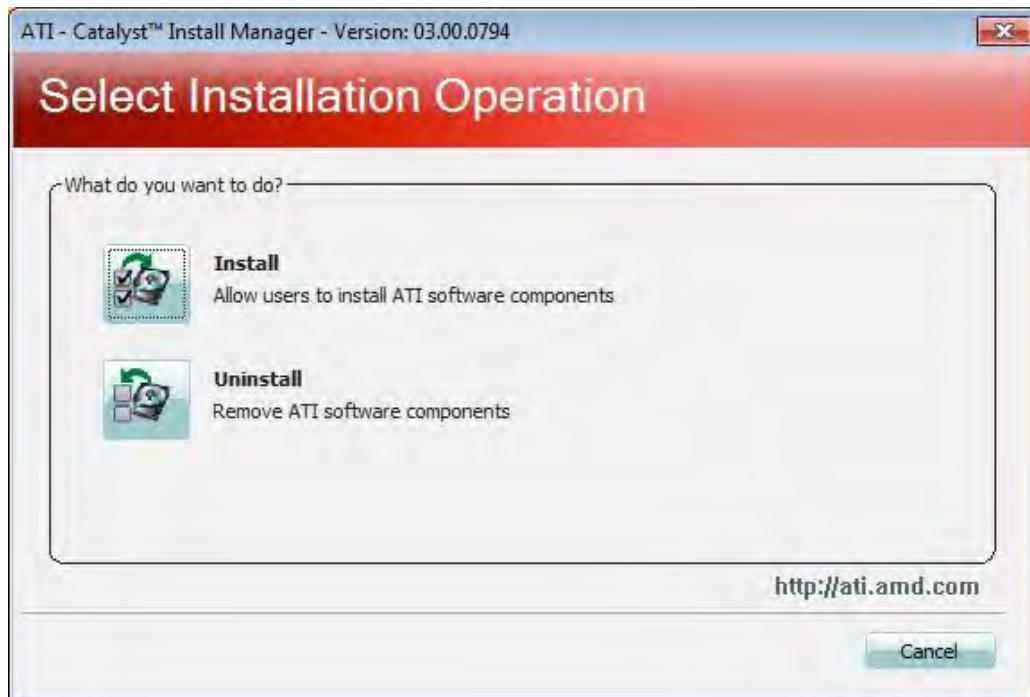
3. Select **Express** and click **Next** to proceed with the installation. On the following screen, click **Finish** to complete the installation process.
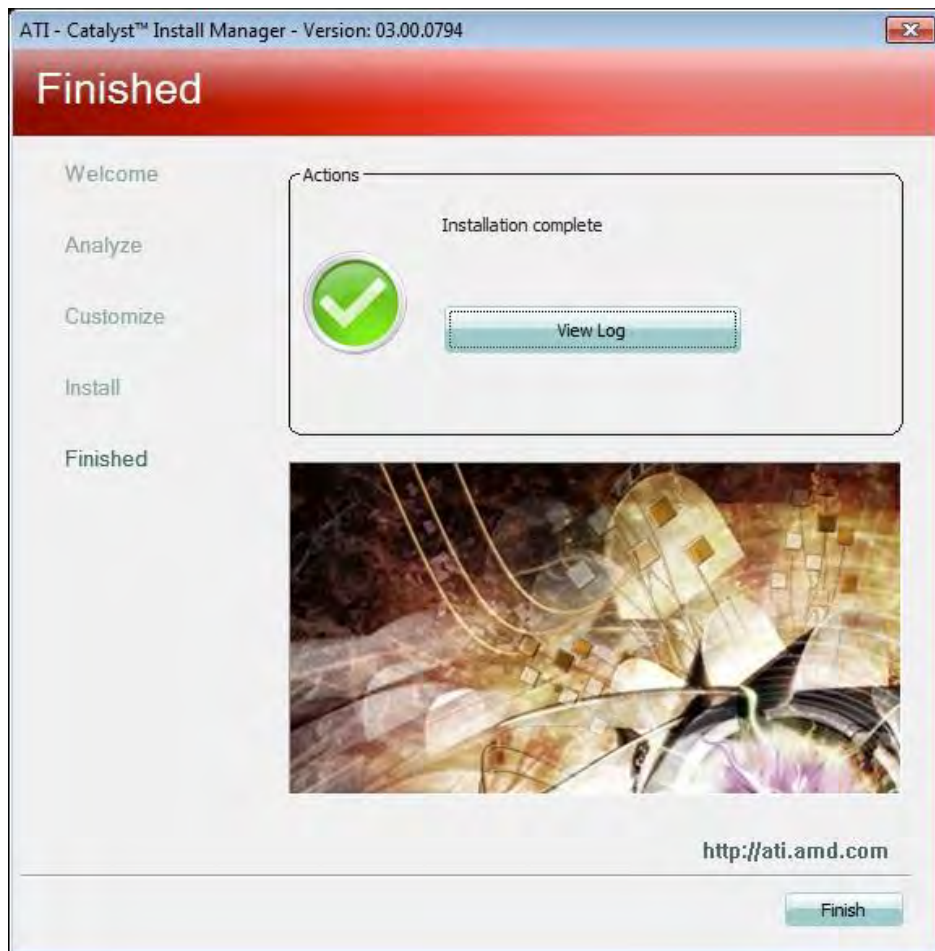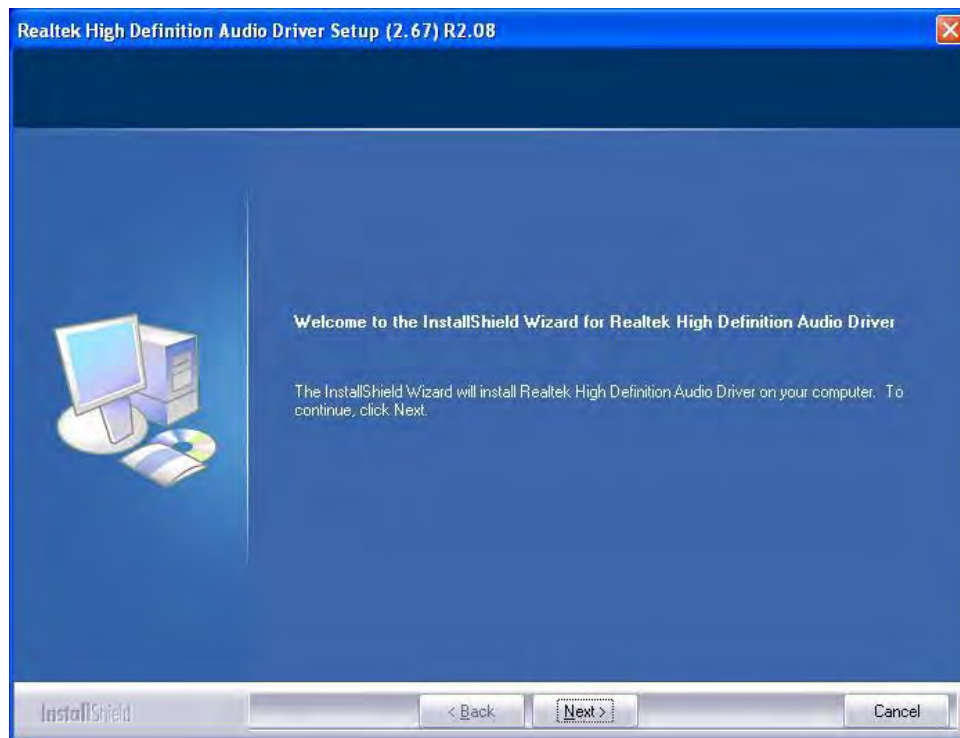
Realtek High Definition Audio Driver Installation

Follow the steps below to install the Realtek HD audio drivers.

1. Insert the CD that comes with the system. Click **AMD** and click **Realtek High Definition Audio Driver.**
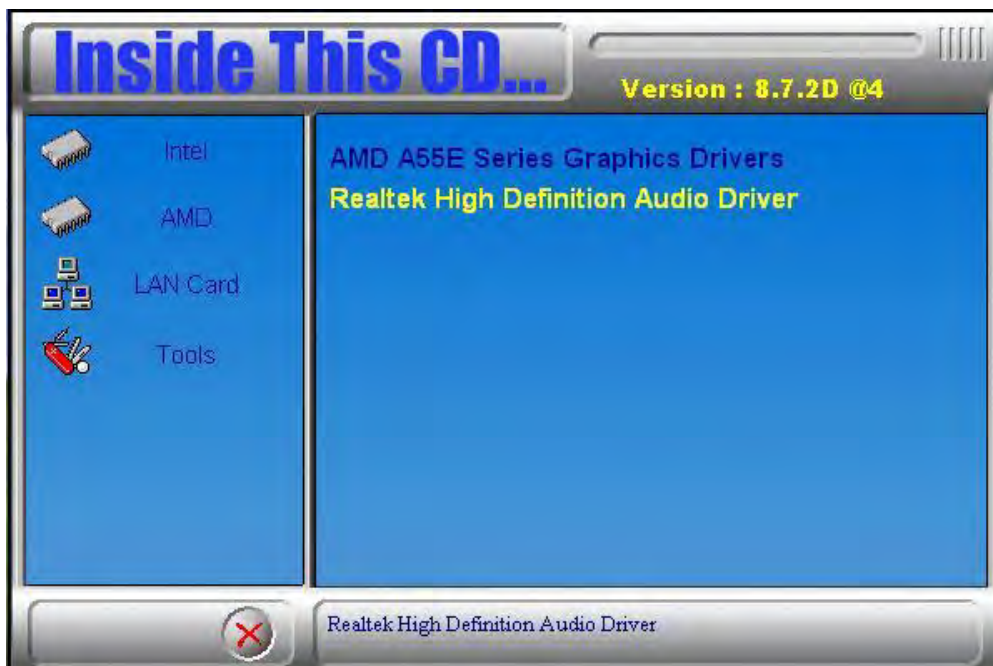
2. When the welcome screen to the Audio Driver Setup appears, click *Next* to start the software installation. Once the InstallShield Wizard is complete, click *Finish* to restart the computer.
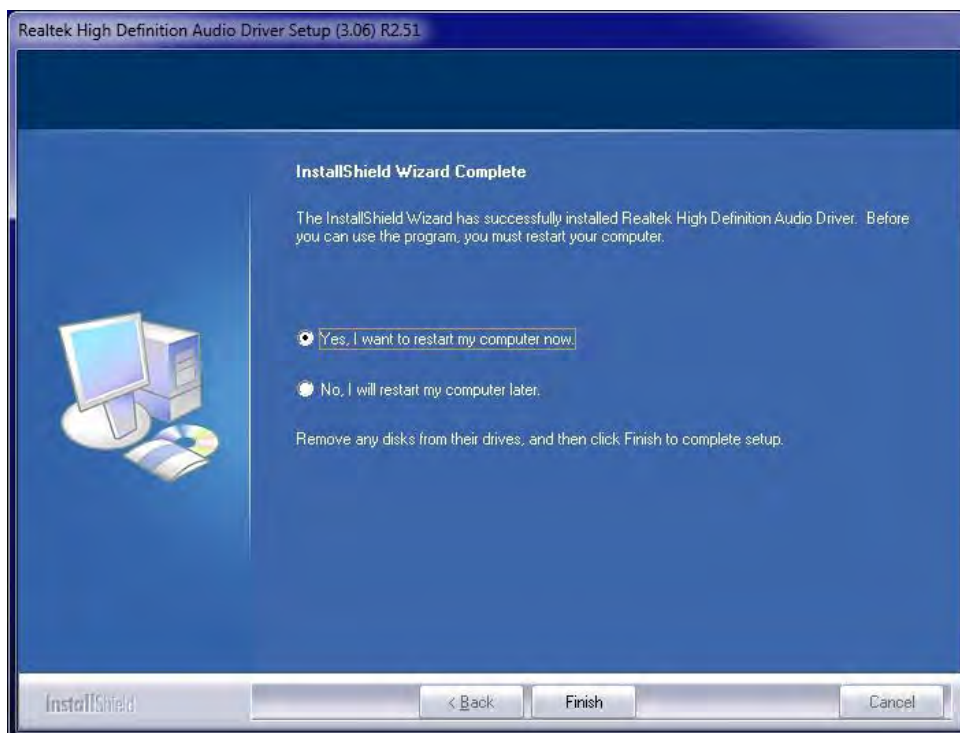
Realtek LAN Controller Drivers Installation
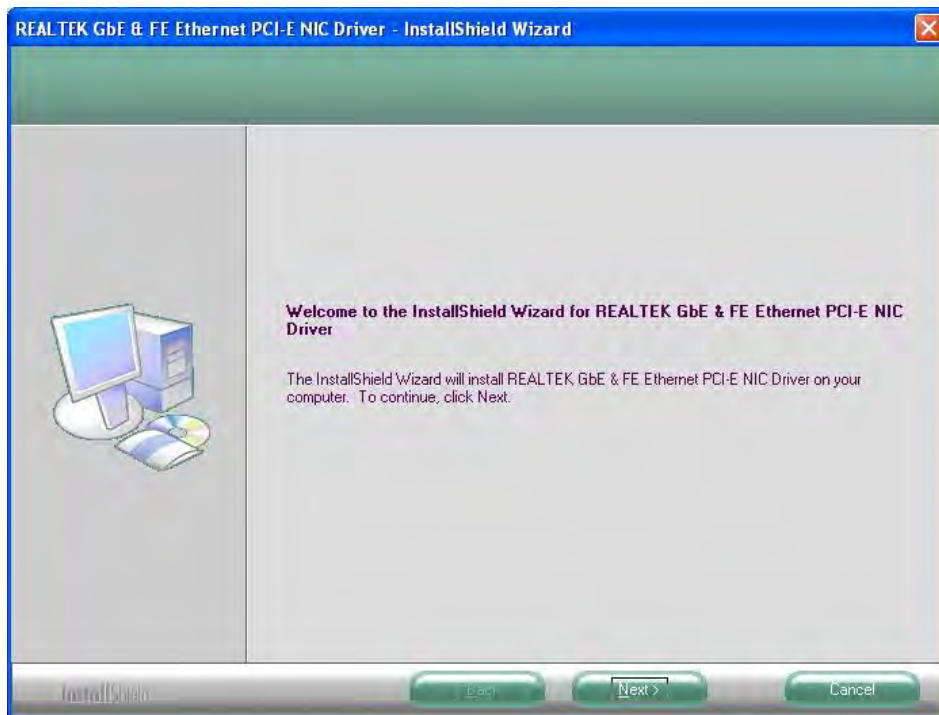
Follow the steps below to install the Realtek LAN drivers.

1. Insert the CD that comes with the system. Click *Intel*, then *LAN Card,* and then *Realtek Lan Controller Drivers*..

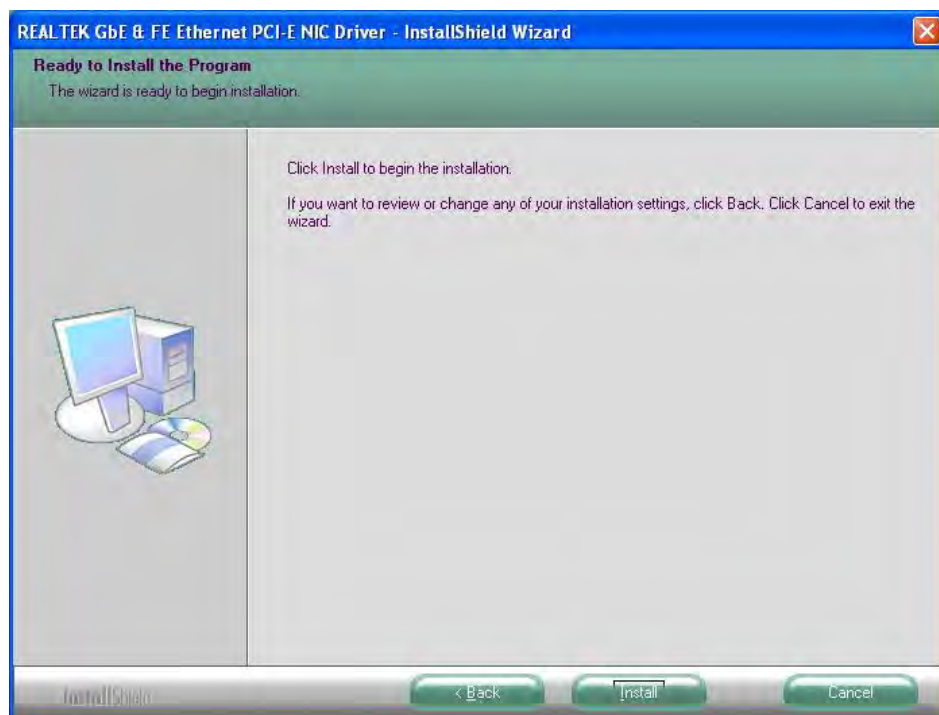
2. Click *Realtek RTL8111E LAN Drivers.*

3. When the Welcome screen of the **InstallShield Wizard** appears, click **Next** to continue.

4. When the InstallShieldWizard has finished installing the Realtek LAN drivers, click *Finish*.

Appendix

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